

UNITED STATES BANKRUPTCY COURT
SOUTHERN DISTRICT OF OHIO
WESTERN DIVISION

In re:)	Chapter 11
)	
Eagle-Picher Holdings, Inc., et al.,)	Jointly Administered
)	Case No. 05-12601
Debtors.)	
)	Chief Judge Jeffrey P. Hopkins.

**REPLY MEMORANDUM IN SUPPORT MOTION BY WILLIAM L. WEST,
CUSTODIAL TRUSTEE OF THE EP CUSTODIAL TRUST, TO ENTER AN
ORDER AMENDING THE EP CUSTODIAL TRUST TO PROVIDE FOR A
TRANSFER OF THE SUM OF \$100,000.00 FROM THE HILLSDALE TRUST
ACCOUNT TO THE ADMINISTRATION ACCOUNT OF THE OF THE
EP CUSTODIAL TRUST [ECF 3553] IN RESPOSE TO THE OBJECTION OF
EPMC HOLDINGS CORPORATION [ECF 3554]**

I. INTRODUCTION.

As set forth in the Motion¹, the issue confronting the Custodial Trustee is that there is approximately \$600,000 remaining in the Hillsdale Escrow Account and important remediation work remaining to be performed at the Hillsdale site; however, the Administration Account has been depleted, which means there are no funds available for the Custodial Trustee's continuing the work at Hillsdale.

In order to address this issue, and enable the Custodial Trustee and his contractors to proceed with the work, the Michigan Department of Environmental Quality ("MDEQ") agreed that \$100,000 of the escrow funds could be transferred to the Administration Account so that the the Custodial Trustee can pay some bills and continue his work at Hillsdale. This proposal

¹ "Motion" refers to *Motion by William L. West, Custodial Trustee of the EP Custodial Trust, to Enter an Order Amending the EP Custodial Trust to Provide for a Transfer of the Sum of \$100,000.00 from the Hillsdale Trust Account to the Administration Account of the EP Custodial Trust* [ECF 3553].

ensures that the primary purpose of the EP Custodial Trust – to address the environmental problems created by the Debtors over decades of operations – can be carried out.

EPMC's Opposition ignores the fact that it released all claims against the Custodial Trust and the Custodial Trustee just over two years ago (See *Agreed Order Resolving Motion of EPMC Holdings Corporation for Approval of Substitution of Cash Collateral for Letters of Credit under the EP Custodial Trust Agreement and Objections Thereto* ("Agreed Order") (Doc. 3523, p. 99-103) and attempts to turn the Motion into a general referendum on the Custodial Trustee's performance. EPMC never really confronts the basic question before the Court – whether allocating \$100,000 to administrative expenses so that the remaining trust funds can be spent addressing the current and future issues EPMC and its predecessors created at the Hillsdale sites furthers the essential purpose of the Custodial Trust. Instead, EPMC argues that the Custodial Trustee should be done at Hillsdale by now and that his administrative expenses have been too high.

Not only does the Settlement Agreement attached to the Agreed Order make it questionable whether or not EPMC has standing at all to make its argument because of EPMC's complete and unconditional release of the Custodial Trust; EPMC's attacks on the Custodial Trustee are ill-informed, mean-spirited, and most of all, flatly wrong.

Among other things, EPMC ignores 1) that it had control of the Hillsdale sites from 1985 on, when the contamination was first discovered, and 2) that the Hillsdale site had not been properly characterized in 2006 when the Custodial Trustee took over. Indeed, the Scope of Work ("SOW") that was appended as Exhibit B to the Michigan Settlement Agreement dated June 30, 2006 (ECF 2200-4) set forth numerous site assessment activities that still needed to be performed, including the characterization of the soils and groundwater at the Hillsdale site.

Even if EPMC were correct – which it is not – the Motion should still be granted. If the Motion is granted, the purpose of the Custodial Trust will be furthered: the Custodial Trust will continue remediation at the Hillsdale site pursuant to a plan that is satisfactory to the State of Michigan. If the Motion is not granted, the Custodial Trust would likely have to be terminated, leaving EPMC and MDEQ to fight over the Hillsdale Trust funds.

Between those two alternatives, there is no question that granting the Motion is in accord with the primary purposes of the Custodial Trust. Moreover, as will be seen, EPMC's allegations are wrong in almost every material respect.

II. FACTUAL BACKGROUND.

In the time the Custodial Trustee has had charge of the Hillsdale site, much progress has been made – far more than during the prior 20 years when the Debtor and Paul Harper² controlled the site.

A. Summary of Custodial Trust's Activities at Hillsdale:

- An original Site Assessment Work Plan was submitted to Michigan DEQ in December 2006 and approved in March 2007.
- The Work Plan was implemented in spring 2007 and consisted of the preparation of an ALTA survey, advancement of ten (10) direct push soil borings inside the site buildings, fifteen (15) hollow stem auger soil borings outside (50" to 100' into bedrock) and the installation of eleven new permanent groundwater monitoring wells. Groundwater contamination in the southwestern corner of the property was still under investigation.
- A Technical Memorandum was submitted to MDEQ in May 2008 for review. MDEQ requested additional monitoring wells off-site to the northeast. Considerable difficulty was encountered trying to locate wells on properties to the northeast. Eventually, the City agreed to allow a well on Arch Street to the northeast in June 2009.
- In September 2009, the Trust advanced 20 soil borings in the source area north of the 215 building to define the nature and extent of the remaining Volatile Organic Compound ("VOC") impact. These borings were completed as soil vapor extraction ("SVE") wells within the bedrock. In November, the

² The Affidavit of Paul Harper (Doc 3554-1) indicates that he served as Director of Health, Safety and Environment for Eagle Picher Incorporated from 1986 to 2006.

Trust installed nine (9) additional wells in the shallow and deep glacial drift in the source area proximal to the highest remaining VOC concentrations to facilitate a SVE test.

- In April 2010, a SVE pilot program was performed on the nine (9) wells in the source area for 120 hours.
- In November 2010, a Remedial Program Work Plan Addendum was submitted to MDEQ outlining the implementation of an in-situ chemical oxidation program to remediate groundwater and a SVE to remediate soil.
- After conferring with MDEQ about the Addendum, the Trust submitted a revised Remedial Program Work Plan Addendum in May 2011 presenting the rationale for conducting pilot study for in-situ chemical oxidation using activated sodium persulfate. The Trust completed and submitted a Part 22 Permit Exemption Request for In-Situ Remedial Discharge in January 2012.
- MDEQ issued the Exemption request in June 2012. One groundwater, five injection wells and two extraction wells were installed in the source area in November 2012. Baseline and bench testing samples were collected and sent to the analytical laboratory and the remediation contractor in December 2012.
- Results from the bench scale testing were reviewed in the 1st quarter of 2013 and CEC conducted the pilot injection of alkaline-activated sodium persulfate in May 2013. The test showed conditions to be favorable to implementing remediation but the higher chemical dosage requirements made this program prohibitive.
- In 2015, the Trust evaluated the option available for the site and decided that bio-enhanced reductive dechlorination and SVE presented the best option for remediation considering the budget restraints. The Trust met with MDEQ in March 2015 to present its plan and the MDEQ concurred in the approach.

To put these efforts in context, here is a comparable summary of what the Debtors accomplished during the 21 years they were in control of the site:

B. Summary of EPMC's Activities Industrial Drive:

- Release of trichloroethylene ("TCE"), a commonly used industrial solvent used as a degreaser for metal parts, was reported by EPMC in 1985. The Release Area was identified and a soil vapor extraction (SVE) system was installed in one well in the spill area in 1986.
- Nine years later in 1996, Dames & Moore was hired by EPMC for the purpose of directing the final investigation and remediation of a TCE impact to soil and groundwater. D&M focused on the following tasks: subsurface soil sampling to achieve closure of the SVE system, conduct groundwater testing to obtain

data for use in the design of a remedial system and define the extent of TCE impact in the bedrock groundwater zone.

- D&M submitted a Remedial Action Plan ("RAP") to MDEQ, but the RAP was found to be unsatisfactory. D&M submitted two revised RAPs in 1998, both of which were deficient and were not approved. D&M then submitted an Additional Remedial Investigation Work Plan in January 1999, which was later revised in April 1999. D&M never received approval from MDEQ for any of its RAPs before it implemented its clean-up plan in the spring of 2000. In 2010, D&M (by then known as URS due to a merger) halted the program.

Moreover, the Custodial Trust was also forced to deal with the decision of URS (the successor to Dames & Moore, EPMC's contractor) to walk off the Hillsdale job in 2010. This forced the Custodial Trustee to file suit against URS in a case known as *William L. West, Custodial Trustee of the EP Custodial Trust v. URS Corporation*, United States District Court for the Southern District of Ohio, Case No. 1:10-cv-00517-MRB. Given the limited resources available to the Custodial Trustee, he ultimately decided to accept a \$250,000 settlement from URS rather than continue to engage in litigation that threatened to drag on for years.

This summary of the activities overseen by the Custodial Trustee strongly rebuts EPMC's baseless allegations. However, because EPMC has sought to distort the focus of this proceeding, certain additional points should be made.

First, the contamination at Hillsdale was discovered in 1985. Despite the fact that the Debtor had been dealing with it for 21 years when the Custodial Trustee was appointed, the Hillsdale site had not yet even been adequately characterized when the Custodial Trustee took over in August of 2006. Characterization of a site involves sampling and analysis of soil and groundwater in all zones impacted by a chemical release. It is required so that the location of the contamination and the amount of the contamination is known, so that the full scope of the problem is known. The Debtor had failed to characterize the upper soil layer, the bedrock below it, and the groundwater zone below it. *See Kolmer Report*, attached as Exhibit 1, p. 5-9.

Second, having failed to adequately characterize the site, the Debtor unsurprisingly failed to properly remediate the site. Although the Debtor anticipated that its method to remediate groundwater contamination in six years, a decade of operation of the groundwater pump had no material effect on pollution levels. From 1999 to 2011 the TCE plume in the groundwater and the concentration of TCE in the plume remained essentially unchanged. In part, this stems from the failure to characterize the site, and in part, from the poor design of the remedial system. *Kolmer Report*, p. 13-15. It should be borne in mind that the Debtor's efforts in this regard were supervised by Mr. Harper, who now complains that the Custodial Trust has failed to accomplish in 9 years what he could not accomplish in 20.

Third, while EPMC now professes angst at the length of time it has taken to remediate the Hillsdale site, EPMC ignores that two years ago it expressed no such dissatisfaction, and in fact entered into a full and complete release of all claims, if any, that it held against the Custodial Trust and the Custodial Trustee in the Settlement Agreement that was attached as Exhibit B to the Agreed Order. The Agreed Order specifically approved the Settlement Agreement.

Indeed, while EPMC lambastes the Custodial Trustee, it ignores the fact that several other sites were resolved within the budget established in the Custodial Trust Agreement, and in some instances, money was returned to EPMC. Pursuant to the Agreed Order (Doc No. 3523), \$237,500.00 was returned to EPMC Corporation, and pursuant to the *Order Granting Motion to Terminate Custodial Trust for Galena, Illinois Property; and (2) Distribute Funds to EPMC Corporation Pursuant to Agree Order Resolving Motion of EPMC Special Purpose Entity, LLC for Approval of Substitution of Cash Collateral for Letters of Credit under the EP Custodial Trust Agreement and Objections Thereto* (Doc. No. 3523), \$60,000.00 was paid to EPMC. In both instances, Environmental Actions had been completed by the Custodial Trustee. In Michigan, Environmental Actions are not completed.

Fourth, the Custodial Trustee's activities at Hillsdale have been formulated under the oversight and approval of the MDEQ, which supports the Motion and prefers to continue working with the Custodial Trustee rather than implement some other solution to the problem. As was made clear in the Motion, the question before the Court is whether the purposes of the Custodial Trust are furthered by permitting a fraction of the trust funds to be spent on current and future administration costs so that the remainder of the trust funds can be spent on addressing the environmental issues at Hillsdale.

The answer to that question is clearly yes: the whole point of the Custodial Trust was to provide for the remediation of the contaminated properties while freeing EPMC from any further liability related to those sites. There is no question that there is more work to be done at Hillsdale. That being the case, the Motion should be granted.

III. LEGAL ANALYSIS:

A. EPMC Lacks Standing to Object.

The Settlement Agreement that was attached to and approved by the Agreed Order dated March 28, 2013 included the following release of the Custodial Trust and the Custodial Trustee:

3) Release of Custodial Trustee. Effective upon the Entry of the Agreed Order, EPMC fully and forever releases and discharges the Custodial Trust, Custodial Trustee and his spouse, beneficiaries, descendants, ancestors, dependents, heirs, executors, administrators, assigns, and successors from any and all claims, actions, causes of action, suits, demands, rights, liabilities, and controversies, both known and unknown, foreseen and unforeseen, absolute or contingent, liquidated or unliquidated, at law, in equity or under any provision of the United States Bankruptcy Code, 11 U.S.C. § 101, *et seq.*, sounding in contract, tort or otherwise, from the beginning of time to the date of the entry of the Agreed Order.

While the *Agreed Order* provided that each Property Account was to be treated the same as a Letter of Credit and the remaining funds were to be treated the same as an undrawn Letter of Credit under the terms of the Custodial Trust, the release of the Custodial Trust and the Trustee

in the Settlement Agreement is absolute, broad, and unconditional: EPMC has released all claims that it may have against the Custodial Trust and the Custodial Trustee, except for what was preserved in the Order. As such, for purposes of the Motion, EPMC lacks standing to assert its claims. *See I&F Corp.*, 219 B.R. 483, 484 (Bankr. S.D. Ohio 1998).

Further, in order to have standing as a party in interest, the party must have a personal stake in the outcome. In *I&F Corp.*, Judge Aug considered the circumstances under which a Chapter 7 debtor would have standing as a party in interest to object to claims. Because the expenses of remediating the Hillsdale site will exceed the amount in the Hillsdale Trust Account, there is no possibility of a distribution back to EPMC, and it lacks a personal stake in the outcome. Therefore, it is not a party in interest. 219 B.R. at 484.³

B. Even if the Court reaches the merits, the objection must still be overruled.

As set forth in the Motion, there are two bases for the relief sought: 1) the power to amend the Trust under Section 6.11, and 2) the common-law doctrine of deviation. Whether under the power to amend the trust under Section 6.11 of the Trust, or under the doctrine of deviation, the fundamental question is the same – is the amendment consistent with the purposes of the trust? *See* O.R.C. 5804.12(A)-(B); *Dalola v. Franciscan Health Sys. of Cent. Ohio, Inc.* 79 Ohio St. 3d 98, 106-107 (1997).

First, the doctrine of deviation permits a court to disregard the express terms of a trust when the doing so will further the purposes of the Trust. Thus, in *Dalola*, when the court was

³ While “the debtor” is included in the statutory list of parties in interest with the right to be heard, *see* 11 U.S.C. § 1109(b), EPMC is not a Debtor. Even if it were, standing is a constitutional, as well as statutory issue. *See, e.g., Baron & Budd, P.C. v. Unsecured Asbestos Claimants Committee*, 321 B.R. 147, 158-160 (D. N.J. 2005); *In re Travelstead*, 227 B.R. 638, 649-650 (D. Md. 1998) (“Although § 1109(b) does allow a party in interest to “be heard on any issue in a case under [Chapter 11],” it does not obviate generally applicable rules of standing...”); *In re A.P.I., Inc.*, 331 B.R. 828, 856-859 (Bankr. D. Minn. 2005) (party seeking to object to confirmation of chapter 11 plan must not only be a “party in interest” under Section 1109, it must also have standing in the constitutional and prudential sense that requires “a personal stake in the outcome.”). *See also Matter of James Wilson Assocs.*, 965 F.2d 160, 169 (7th Cir. 1992) (“We think all the section [1109(b)] means is that anyone who has a legally protected interest that could be affected by a bankruptcy proceeding is entitled to assert that interest with respect to any issue to which it pertains...”)(cited with approval by *In re CNS, Inc.*, 255 B.R. 198, 203 (N.D. Ohio 2000).

confronted with the question of whether funds from a trust set up to provide health care to the poor at a hospital in Columbus could go to an entity providing health care to the poor in Dayton. The court held that the essential purpose of the gifts was to provide health care to the poor. Therefore, use of the fund for charitable purposes outside of Columbus was permitted. 79 Ohio St. 3d at 104.

In *Daloia*, the court cited with approval the venerable case of *McIntire's Admrs. V. Zanesville*, 17 Ohio St. 352 (1867). In that case, a trust had been set up to establish a school for the poor in Zanesville. When Ohio established schools for all children, the question arose whether the object of the gift had been exhausted, so that the balance should be paid over to the settlor's heirs. The court held that so long as the funds could be directed to support education for the poor in other ways, the trust should not be terminated. The court left it to the discretion of the court and trustees to find ways to provide educational support to the poor, such as providing books, supplies, shoes, clothes, or even food. 17 Ohio St. at 365.

Here, the Custodial Trust was set up, first and foremost, to address the contamination issues at Hillsdale and other sites. The purpose of the Custodial Trust was to address the environmental issues at those sites. There is no dispute that the environmental issues at Hillsdale remain. It is also clear that the only way the Trust funds can be used for their intended purpose is if the Custodial Trustee can pay its bills and the administrative costs of overseeing the efforts of the Trust's contractors.⁴ Accordingly, granting the relief requested in the Motion furthers the purposes of the Trust.

⁴ It is noteworthy in this regard that the Trust's restrictions on the proper sources of funds for administrative expenses do not contain any provisions suggesting that forfeiture is the proper remedy if its provisions are not strictly followed. The absence of a provision for forfeiture in this situation shows an intent that the grantor gave greater weight to carrying out the general purposes of the trust than it did to mandating strict compliance with the letter of its terms. *First Nat. Bank of Akron v. Unknown Heirs of Donnelly*, 96 Ohio App. 409, 515 (Summit App. 1954).

With respect to the modification provision found in Section 6.11 of the Trust Agreement, Ohio law provides that the court may modify administrative provisions of the trust if continuation of the trust on its existing terms would be impracticable or impair the trust's administration. O.R.C. 5804.12(B). Moreover, Section 5804.12(A) gives the court the power to modify a trust's provisions, in accord with the intention behind the trust. As set forth above, the administrative provisions of the Custodial Trust have made the continuation of the Trust on its existing terms both impracticable and impair the Custodial Trustee's ability to administer the Custodial Trust. Given that the proposed amendment furthers the Custodial Trust's essential purpose – to address the environmental issues of the Debtors' former properties – the proposed amendment is fully consistent with Section 5804.12.

C. EPMC's Allegations Do Not Warrant Denial.

Set against these considerations, EPMC does not seriously contend that the amendment would not further the cause of addressing the environmental issues at the Hillsdale site. Rather, it complains that the Custodial Trustee has spent too much time assessing the site,⁵ and that the administrative expenses have been excessive.⁶

EPMC's assertion that the scope of the problems at the Hillsdale sites had been determined "on Day 1" is completely undermined by Exhibit B to the Michigan Settlement Agreement. Exhibit B confirms that it was contemplated that the Custodial Trustee would undertake substantial Site Investigation (aka characterization) actively prior to undertaking additional site remediation. *See* ECF No. 2200-4, p. B4-B5 (ECF pages 35-36). EPMC's

⁵ EPMC makes much of an email sent in 2014 by the Custodial Trustee that says the Hillsdale site would be remediated by means of an SVE system that would cost \$370,000. There was no representation made that \$370,000 would be the total remaining cost, but only the next step to be taken at Hillsdale. Accordingly, the "doubling" of remediation costs is purely an invention of EPMC.

⁶ EPMC suggests that there was some misconduct by the Custodial Trustee in the fact that it was not provided with annual budgets. However, Section 3.2(b) of the Trust Agreement only requires the preparation of such budgets. They were provided to the MDEQ pursuant to Section 4 of the Michigan Settlement Agreement (*see* ECF No. 2200-4), which requires that the budgets be submitted to MDEQ and USEPA but not to anyone else. Budgets were to be maintained for inspection by "Current Beneficiaries" of the Trust. The Custodial Trustee had no obligation to provide budgets to EPMC.

“expert” Mr. Harper’s contention that the site was ready for remediation on Day 1, is thus revealed for what it is – the Monday-morning quarterbacking of someone who had failed to address the Hillsdale issues in the 20 years he was in a position to do so. The Custodial Trustee’s pursuit of further site characterization and assessment was not a frolic and detour, as EPMC seems to suggest. Rather, it was **mandated** by the terms of Exhibit B.

EPMC also argues that Soil Vapor Extraction (“SVE”) was always expected to be needed to remediate the Industrial Drive site. Not so. First, the 2006 SOW mentioned several technologies to be considered but does not include SVE since EPMC insisted that the soil had been remediated.

Second, Dames & Moore (EPMC’s contractor) reported to MDEQ on September 22, 2000 that the then existing SVE system had effectively remediated the soil unit and recommended terminating the system. EPMC terminated the SVE system shortly thereafter, despite MDEQ’s insistence that the lower soils had **not** been characterized.

Now EPMC asserts that SVE was always expected to be needed to remediate the site. That assertion lacks credibility because EPMC had followed the advice of its consultant in 2000 and terminated the existing SVE system under the erroneous and unsubstantiated conclusion that the soils at the site had been remediated. If EPMC believed that a SVE system was required, it had from 2000 to 2006 to install one; EPMC never proposed the installation of another SVE system at the site.

EPMC also asserts that when the Trust was established the Hillsdale site would be remediated in five years. Such a timetable was not mentioned in the Custodial Trust Agreement or the Michigan Settlement Agreement and SOW. The Custodial Trustee was never informed of such a schedule and would have objected to it as unreasonable considering the complexities of

the site and EPMC's failure to make any significant headway in the remediation between 1986 and 2006.

EPMC's claim that the relief requested is futile is without merit; the bottom line is that the fact that the Custodial Trust does not have sufficient resources at this time in it to ensure the full remediation of the Hillsdale site is hardly a reason to spend none of that money at the Hillsdale site because both the Custodial Trustee and the State of Michigan believe the current plan will improve the Hillsdale site.

CONCLUSIONS

EPMC's arguments regarding what actions the Custodial Trustee has taken at Hillsdale are not only Monday-morning quarterbacking unsupported by the legal documents defining the Custodial Trustee's legal obligations; those arguments are also wrong. This is thoroughly demonstrated in the factual background section above that sets forth what activities the Custodial Trustee has taken.

If EPMC were so dissatisfied with the Custodial Trustee's performance, one would have expected that it would have sought relief from this Court at some point over the last decade. Instead, EPMC remained silent, even though, year after year, the Custodial Trustee was filing his annual reports with the Court, making those reports available to EPMC's counsel for free. Indeed, far from ever making any complaint, in 2013 - 7 years after the Custodial Trustee took his position, EPMC granted the Custodial Trustee the fullest and broadest release imaginable.

Finally, this Court should know that all of the work of the Custodial Trust has been substantially completed with the exception of the Hillsdale site, and a disposition of Property in Miami, OK, which the Custodial Trustee continues to monitor. Against all odds, the Galena, KS property has been completely remediated within its budget of \$6,000.00.00 and sold.

Completion of all other work of the Custodial Trust is described in the Annual Reports filed with this Court.

For the reasons stated above, the Custodial Trust should not fail, and the Motion should be granted.

Dated: May 28, 2015

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and accurate copy of the foregoing *Reply Memorandum in Support of the Memorandum by William L. West, Custodial Trustee of the EP Custodial Trust, to Enter an Order Amending the EP Custodial Trust to Provide for a Transfer of the Sum of \$100,000 from the Hillsdale Trust Account to the Administration Account of the EP Custodial Trust [ECF 3553] in Response to the Objection of EPMC Holdings Corporation [ECF 3554]* was filed electronically this 28th day of May, 2015. Notice of this filing will be sent to all

parties *via* the Court's electronic filing system. Parties may access this filing through the Court's system.

In addition, the following parties were served postage prepaid regular U.S. Mail:

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REPORT OF JOSEPH R. KOLMER, P.E.

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ATTACHMENTS



1.0 INTRODUCTION

This report addresses the activities of Dames & Moore (D&M) at the Eagle Picher (EP) Hillsdale Facility located on Industrial Drive in the Hillsdale Industrial Park, City of Hillsdale, Michigan (Hillsdale Facility). Specific activities include the environmental investigation and remediation work related to the presence of the chlorinated solvent trichloroethylene (TCE) at the Rubber Plant building, located at 215 Industrial Drive in the southwest corner of the Hillsdale Facility. A release of TCE was reported in 1985 to the Michigan Department of Natural Resources (MDNR).

Subsequent to the TCE release, several environmental investigations were conducted by consultants retained by EP. The area where the TCE was released (Release Area) was identified as the principal area of chlorinated solvent contamination. In 1986, a soil vapor extraction (SVE) system was installed in the Release Area to clean-up the soil.

D&M was hired in 1996 "for the purpose of directing the final investigation and remediation of a trichloroethene (TCE) impact to soil and groundwater." (Voluntary Investigative and Remedial Actions Work Plan, D&M, Page 1, August 14, 1996) Based on its review of the previous investigative work, D&M identified the following activities to address data gaps:

- Subsurface soil sampling to obtain sufficient soil analytical data from the former Release Area to achieve closure of the SVE system;
- Conduct of a groundwater pump test to obtain data for use in design of the remedial system; and
- Define the extent of TCE impact in the bedrock groundwater zone.

After it completed its investigative work, D&M developed a plan (termed a Remedial Action Plan, or RAP) for the clean-up of the groundwater contamination. D&M's initial RAP



was submitted to the Michigan Department of Environmental Quality (MDEQ)¹, which found it unsatisfactory. In response to MDEQ's comments, D&M prepared and submitted revised RAPs, one on March 2, 1998, and the second on June 19, 1998. MDEQ also found the revised RAPs to be deficient and did not approve them. Finally, D&M prepared an *Additional Remedial Investigation Work Plan* in January 1999, which was revised in April 1999. This Work Plan described the additional investigative activities D&M would perform before designing and implementing a groundwater remedial system. D&M never received approval from MDEQ for any of its RAPs before it implemented its clean-up plan in the spring of 2000.

Overall, the investigative work conducted by D&M, as well as its selection, design, operation, and monitoring of the clean-up system was flawed. The investigative work did not adequately define the conditions of the soil, bedrock, or groundwater at the site, and these deficiencies were noted on numerous occasions by MDEQ. The ground water clean-up system selected by D&M employed a technology not suited to the task, and the system's design and operation were deficient.

¹ MDEQ was previously named Michigan Department of Natural Resources (MDNR).



2.0 D&M FAILED TO PROPERLY CHARACTERIZE THE SITE

A proper site characterization involves adequate sampling and analysis of all of the zones (media) impacted by the chemical release. Such a characterization should start in the area where contaminants were released and then extend outward following the pathways of contamination. The media requiring characterization in and around the Release Area at the Rubber Plant are:

- The upper soil unit, which extends from the ground surface to a depth of approximately 25 to 30 feet;
- The sandstone bedrock², which underlies the upper soil unit; and,
- The groundwater zone (aquifer) that is in the lower 10 feet of the sandstone, at a depth of approximately 50 feet below ground surface (bgs) and extends to a depth of approximately 60 feet.

2.1 D&M FAILED TO ADEQUATELY INVESTIGATE THE UPPER SOIL UNIT IN THE RELEASE AREA.

The investigation performed by D&M in the upper soil unit was deficient, and MDEQ pointed out these deficiencies on numerous occasions. For example, its comments on D&M's *Voluntary Investigative and Remedial Actions Work Plan* (August 14, 1996) cited the need for "biased soil samples" in several different areas of the upper soil unit (MDEQ letter from Speilberg to Moon at EP, Page 1, September 24, 1996). Biased soil samples are samples that are collected in known or suspected areas of high contamination so that the magnitude of contamination can be characterized. D&M did not collect any biased soil samples, or otherwise adequately address MDEQ's comment.

² The sandstone bedrock is fractured, which increases its permeability, meaning that contaminants can more easily move through it.



When D&M submitted its RAPs, MDEQ noted the lack of proper characterization of the upper soil unit. MDEQ's April 1998 letter in response to the March 2, 1998 RAP noted that the plan "lacks any comprehensive treatment of soil impacts." (MDEQ letter from Klepper to Moon at EP, Page 2, April 20, 1998) On October 13, 1998, in response to the June 19, 1998 RAP, MDEQ again observed that "the maximum contaminant concentrations as well as horizontal and vertical extent" of contamination needed to be determined (MDEQ Letter from Klepper to Moon at EP, List of Required RAP Elements 2.0, October 13, 1998).

D&M submitted an *Additional Investigation Activities Work Plan* on January 13, 1999, to address MDEQ comments. This work plan included a random sampling method for assessing the upper soil unit in the Release Area. MDEQ found this random sampling method deficient and asked for more detail (MDEQ Letter from Katko to Heinze at D&M, Page 1, March 16, 1999). On April 2, 1999, D&M submitted a revised work plan to MDEQ, which still failed to include biased soil sampling. During a subsequent telephone conversation between them, MDEQ again urged D&M to conduct biased soil sampling, but D&M would not agree. MDEQ also wanted the largest number of soil samples in the lower portion of the upper soil unit, because: "Based on the constituent we have and its nature (DNAPL), we would expect to find it deeper."³ (Record of telephone conversation between Heinze of D&M and Katko of MDEQ and recorded by Heinze, June 4, 1999).

The results of D&M's random soil sampling revealed that at 14 of the 18 sampling locations, the concentrations of TCE were above MDEQ's regulatory limit of 100 parts per billion (ppb). Nevertheless, D&M asserted that the isolated nature and location of the soil contamination had "insignificant potential for leachate generation" and, therefore, insignificant potential for groundwater contamination (Interim Measures Implementation Report, URS D&M,

³ DNAPL is an acronym for dense non-aqueous phase liquid. DNAPL refers to a group of organic substances—TCB is one—that are relatively insoluble in water, and are heavier than water.



September 22, 2000). Despite the data generated by its soil investigation, D&M recommended decommissioning the SVE system in the upper soil unit.

This recommendation was flawed. D&M should have concluded that TCE contamination of the upper soil unit was significant. SVE systems only remove a portion of the solvent in the area where they operate. The SVE system, which only affected a portion of the Release Area, had recovered over 100 gallons of TCE. These facts indicated that significantly more than 100 gallons of TCE had been released. D&M knew that MDEQ had concerns about the presence of DNAPL at the site. D&M also knew from previous sampling results that the upper soil unit, from near ground surface down to the bedrock, was contaminated with TCE. Based on D&M's own limited sampling effort, it knew that the soil contamination was above regulatory limits. D&M should have expanded its investigation as requested by MDEQ, and properly characterized the upper soil unit. Instead, D&M incorrectly concluded that the SVE system had effectively remediated the upper soil unit.

2.2 D&M FAILED TO CHARACTERIZE THE BEDROCK.

The bedrock underlies the upper soil unit and is composed of a fractured sandstone. The upper portion of this bedrock is unsaturated, and this unsaturated zone extends from approximately 25 to 30 feet bgs to about 50 feet bgs. The groundwater aquifer is in the lower 10 feet of the sandstone bedrock. A shale layer underlies the sandstone and forms the base of the aquifer.

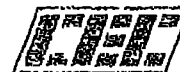
The initial (pre-D&M) investigations at the site noted that contamination had migrated through the upper soil unit and penetrated into the bedrock. D&M was aware of this finding. MDEQ's comment letters of D&M's RAPs repeatedly noted that D&M needed to characterize the bedrock, but this was never done.



MDEQ specifically required "an evaluation of impacts to the unsaturated zone of bedrock" in its April 20, 1998 comment letter to EP concerning the "Incomplete Remedial Action Plan" submitted by D&M on March 2, 1998 (MDEQ Letter from Klepper to Moon at EP, Page 2, April 20, 1998). This comment was ignored by D&M when it prepared the June 1998 RAP. MDEQ reiterated its comment on this "Incomplete Remedial Action Plan" stating "impacts to unsaturated bedrock will also need to be characterized and evaluated," (MDEQ Letter from Klepper to Moon at EP, List of Required RAP Elements 2.0, October 13, 1998) MDEQ further stated that "This characterization needs to be completed before a RAP can be approved." (Id.) This comment was ignored when D&M prepared its *Additional Investigation Activities Work Plan* (January 1999). MDEQ's comments on this work plan pointedly noted that D&M had not included an assessment of bedrock contamination, and that this assessment had been previously requested (MDEQ Letter from Katko to Heinze at D&M, Page 1, March 16, 1999). D&M again ignored MDEQ's comments when it conducted its additional field investigation work in September 1999.

D&M also ignored the available scientific literature regarding DNAPL contamination. For example, Pankow and Cherry stated that "at sites where the water table exists at depths of a few tens of meters or less, and where there are no geologic strata with exceptional capability for impeding DNAPL penetration, a solvent DNAPL release of a few tens of liters at a single location should be considered capable of permitting DNAPL to enter the groundwater zone." (Pankow, J.F. & Cherry, J.A., *DENSE CHLORINATED SOLVENTS and Other DNAPLs in Groundwater*, Page 63, Waterloo Press, 1996) The Hillsdale site meets these conditions.

- The water table is only 15 meters below the ground surface.
- The soil data showed that TCE contamination had migrated through the upper soil unit and penetrated into the bedrock, so there are no geologic strata impeding DNAPL penetration.



- Well over 100 gallons of TCE was released.
- The release was reported for a single location.

D&M should have realized that DNAPL had entered the bedrock and the groundwater, yet it ignored MDEQ's repeated requests to characterize the bedrock. When the bedrock was finally characterized by the Custodial Trustee, evidence of DNAPL presence was found.⁴ This information would have been available to D&M if it had followed basic environmental site investigation procedures and the recommendations of MDEQ.

2.3 D&M FAILED TO CHARACTERIZE THE GROUNDWATER.

D&M failed to characterize the groundwater beneath the Release Area. The Release Area is the principal area of chlorinated solvent contamination, and as such, is the principal source area for groundwater contamination. An effective groundwater clean-up program requires a thorough understanding of the source area. If clean-up of the source area is not accomplished, effective clean-up of the contaminant plume emanating from the source cannot be accomplished.

Because D&M did not characterize the groundwater in the Release Area, it was unable to comply with MDEQ's requests that all site impacts be addressed and for a map showing the plume location with respect to the original source area. The fact that D&M had no understanding of groundwater contamination in the Release Area is documented by one of the TCE plume maps in D&M's September 2000 report. This map depicts the TCE groundwater concentration in the Release Area as 5 ppb, which is impossible because the monitoring well immediately adjacent to the Release Area shows a concentration of 460 ppb.

⁴ Concentrations of TCE on the order 2,000 to 6,000 ppb were found in the bedrock at the water table, and elevated concentrations of TCE were found in the ground water in the vicinity of these bedrock samplings.



3.0 THE D&M REMEDIAL ACTION PROPOSAL

Following its investigative activities, D&M provided a proposal to EP on November 24, 1999, describing the work D&M would perform to remediate the groundwater at the site, and this proposal was included in a contract to construct and operate the remedial system. D&M's scope of work included "installation, start-up, operation and maintenance and sampling and analysis" activities associated with its suggested remedial action, a pump-and-treat system. A pump-and-treat system pumps contaminated groundwater to the ground surface where it is treated and discharged. In its proposal, D&M referenced its *Revised Remedial Action Plan* (June 18, 1998) as the document defining the remedial system concept. As noted above, in Sections 2.1 and 2.2, this RAP was found deficient by MDEQ. For the purpose of implementing its proposed remedial action, D&M renamed the RAP and called it an *Interim Measures Remedial Action Plan*.

3.1 D&M'S GROUNDWATER REMEDIATION PLAN.

D&M proposed one horizontal well and three vertical extraction wells to remediate the groundwater. The water intake portion of the horizontal well would be 1,000 feet long, installed at a depth of approximately 65-75 feet, and screened at the base of the sandstone bedrock. The starting point for this well would be east of the Rubber Plant building and would not collect groundwater until it was more than 250 ft away from the Release Area. The three vertical extraction wells were to be installed approximately 100 feet north-northeast of the Release Area. Each well would be drilled through the sandstone bedrock into the underlying shale layer to a depth of 75 feet.



3.2 START-UP AND OPERATIONS.

Groundwater pumps and associated equipment would be installed after well installation was complete. During system start-up, pumping would be optimized to obtain the highest sustainable groundwater pumping rates, and groundwater elevation measurements would be taken to assess the impact of the remedial system on the contaminant plume. The groundwater extracted by the remedial wells and one monitoring well would be sampled to establish baseline conditions at the beginning of remedial operations.

3.3 OPERATION, MAINTENANCE AND REPORTING.

D&M used a computer model to simulate the impact of its proposal on groundwater removal and the predicted reduction in the size of the contaminant plume over time. It projected that its proposed pump-and-treat system would remediate the groundwater in six years. During the time the system was operated, D&M would submit quarterly reports to MDEQ. When the groundwater was remediated, D&M would prepare a final closure report.

3.4 REMEDIAL COST AND CLEAN-UP OBJECTIVE.

D&M proposed to install and operate the pump-and-treat system for \$755,000, to be paid by EP in a lump sum. However, this did not include the cost for disposal of the pumped groundwater (the cost of which was \$2.64 per thousand gallons), which was paid by EP.

D&M's proposal stated that EP "will not be responsible for any remediation costs above the specified project cost." (D&M Letter from Viala to Moon and Dixon at EP, Page 2, November 24, 1999) It also stated that, "Dames & Moore will be responsible for all costs to remediate the Known Contamination above the Specified Project Cost, such as the cost of any additional groundwater extraction well(s); pumps, treatment equipment, and the operation and maintenance of the system beyond the projected six (6) years of remediation." (Id.)



D&M "guaranteed" that its remedial design would clean up the TCE plume in the groundwater emanating from the Hillsdale facilities to the MDEQ standard of 5 ppb. D&M also guaranteed that its remedial system would clean-up the "Known Contamination," which it defined as "the TCE plume in groundwater emanating from the Hillsdale facilities." (Id.) On November 29, 1999, EP accepted and signed D&M's proposal/contract, and gave D&M authorization to proceed. Since that date (the date D&M and EP entered into the contract) the size of the plume and the concentration of TCE in the plume has remained essentially unchanged.



4.0 D&M IMPROPERLY SELECTED, DESIGNED, OPERATED AND MONITORED THE GROUNDWATER REMEDIAL SYSTEM

The selection, design, and operation of a remedial technology should be based on site conditions, and an evaluation of the remedial technologies that can mitigate those site conditions. D&M's failure to adequately characterize the bedrock and groundwater in the Release Area resulted in the selection of an inadequate remedial system, which was improperly designed and operated. More than ten years have passed since D&M initiated groundwater remediation, and the concentration of TCE in the groundwater has not materially declined.

4.1 D&M IMPROPERLY SELECTED THE REMEDIAL TECHNOLOGY.

D&M chose a pump-and-treat technology to clean-up the groundwater. This technology was used extensively in the early years of environmental work, but by the early 1990s, it had become clear that pump-and-treat technology, by itself, was not capable of restoring groundwater contaminated with chlorinated solvents (such as TCE) to the levels that D&M committed to in the 1999 Contract. If the site had been properly characterized, D&M would have known the magnitude of TCE contamination and would have been better equipped to select an appropriate remedial technology.

Travis and Doty studied the application of pump-and-treat technology at sites contaminated with TCE. They stated,

"Approximately 76% of Superfund sites for which pumping and treating is selected as the aquifer restoration method are contaminated by trichloroethylene (TCE), a contaminant denser than water. The geometric mean for the maximum concentration of TCE detected in groundwater at the 50 sites we reviewed was 845 ppb with a range of 2-81,000 ppb. The MCL for TCE is 5 ppb. Thus, for groundwater pumping to restore the average Superfund site, pumping must



remove more than 99% of the mass of TCE in the dissolved and nonaqueous phases. It is well known that even with enhanced oil recovery methods, oil companies can only remove 30-50% of the oil from the subsurface."

(Travis, C.C. and Doty, C.B., Can Contaminated Aquifers at Superfund Sites Be Remediated? ES&T Views, Vol 24, No. 10, Pages 1465-1466, 1990)

In September 1998, USEPA stated, "It is becoming increasingly apparent that pump-and-treat technologies require considerable investment (between \$14-17 million) over a long time (30 years or longer), and may not actually clean up the source of contamination." (Field Applications of In Situ Remediation Technologies: Chemical Oxidation EPA 542-R-98-008, Page 1, September 1998) D&M should have known that a pump-and-treat system, by itself, was not an adequate and proper technology for this project.

4.2 D&M IMPROPERLY DESIGNED THE REMEDIAL SYSTEM.

The design of the pump-and-treat system implemented by D&M was flawed. The primary component of the system was a horizontal well that was installed in the aquifer along the axis of the plume. D&M's design concept was that pumping from the horizontal well would impact the entire length and breadth of the plume, reducing the concentration of TCE and shrinking the plume.

However, the horizontal groundwater extraction well was installed east of the Rubber Plant and never passed under the Release Area, and therefore, never provided for withdrawal of groundwater in that area. In addition, the horizontal well did not start to withdraw groundwater until a distance of over 250 feet away from the Release Area. This means that not only was the Release Area not materially impacted by the pump-and-treat system, the portion of the plume immediately outside of the Release Area was not pumped by the horizontal well. These areas will have the highest concentration of contamination and should be the primary targets for remediation.



A groundwater pump test was conducted by D&M in December 1996 to gather data for the design of the remedial system. This test showed that only limited quantities of groundwater could be pumped, and that pumping of the well had a very limited distance of influence within the groundwater aquifer. Given this data, D&M should have known that its groundwater extraction well would not be adequate to effectively contain or shrink the plume.

4.3 D&M IMPROPERLY OPERATED THE REMEDIAL SYSTEM.

D&M provided the design and operating information for the horizontal well in its September 2000 report. The water intake portion of the horizontal well was 1200 feet long, and was being pumped at 12.8 gallons per minute (gpm). This equates to approximately 0.01 gpm per foot of well which, over 24 hours, would remove approximately 15 gallons of groundwater per foot of well. This is approximately the amount of water a garden hose can deliver in three minutes. This is a very low flow rate and is not sufficient to influence the entire plume.

A vertical groundwater extraction well had been installed by D&M just north of the Release Area, and the purpose of this well was "to facilitate remediation of the TCE groundwater plume near the source area." (Interim Measures Implementation Report, URS D&M, Page 6-4, September 2000) The daily data summary for the remedial wells shows that this well was never effectively pumped, and remediation of the TCE groundwater plume near the source area was not accomplished.

The proof of the inadequate design and operation of the pump-and-treat system is shown by its failure to accomplish its stated objective. D&M's own monitoring data shows that after five years of system operation and the removal of around 20 million gallons of groundwater, only approximately three-quarters of a gallon of TCE had been removed.



4.4 D&M IMPROPERLY MONITORED THE REMEDIAL SYSTEM.

The groundwater pumped from the horizontal extraction well was monitored on a monthly basis, and samples for chemical analyses were generally collected and analyzed quarterly. The groundwater monitoring wells were also monitored on a quarterly basis to assess any changes in the lateral extent of the plume.

Monitoring data is supposed to be used to assess the operation and effectiveness of a remedial system and to determine whether operational changes are needed. It appears that D&M largely ignored the monitoring data it collected. D&M had developed a computer model to predict the impact its remedial system would have on the contaminant plume. The model predicted significant plume reduction after the first year of system operation. However, despite the fact that, year after year, the monitoring data continued to show no appreciable impact on the plume, D&M did nothing.

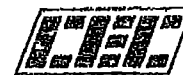
The fact that the monitoring data documented the inadequacy of D&M's remedial system was confirmed by Mr. Ken Hagg, P.E., of URS when he wrote to the Custodial Trustee on March 10, 2009, "URS's monitoring efforts show no significant change in TCE levels at the site since the beginning of work in 1999." (URS Letter from Hagg to William West, March 10, 2009)



5.0 FINANCIAL IMPACT TO THE CUSTODIAL TRUSTEE

D&M's failure to adequately investigate, characterize and remediate the site has had a significant impact on the Custodial Trustee. MDEQ has required him to perform these tasks. As of the date of this Report, the Trustee has incurred costs of approximately \$831,000 related to work conducted by the Trustee's environmental consultant, CEC. This work included investigating, characterizing, and evaluating alternative remedial systems for the site. Because D&M did not remediate the groundwater as it guaranteed, the Trustee must install, operate, and monitor a groundwater remedial system, which is estimated to cost at least \$600,000.

As of the date of this Report, it is not known whether MDEQ will also require the Trustee to perform soil remediation. If such work is conducted, it is estimated to cost at least \$400,000.



6.0 ADDITIONAL INFORMATION

The resume of Joseph R. Kolmer, P.E. is attached to this report along with a listing of the documents he relied upon when preparing this report. Mr. Kolmer has not authored any publications in the past ten years that relate to engineering or environmental matters. Mr. Kolmer has not testified at trial or in deposition over the past four years. Mr. Kolmer's compensation rate for the EP project is \$165.00 per hour. The attached three (3) drawings may be used to elaborate on this report.